

CISE Research Resources (CISE-RR)

Program Solicitation

NSF 01-100

**DIVISION OF EXPERIMENTAL AND INTEGRATIVE ACTIVITIES
DIRECTORATE FOR COMPUTER AND INFORMATION SCIENCE AND
ENGINEERING**

LETTER OF INTENT DUE DATE(S) (*optional*): June 6, 2001

FULL PROPOSAL DEADLINE(S) :

**July 6, 2001: First Monday in February in 2002 and thereafter
*optional letters of intent due 1 month before the due date.***



NATIONAL SCIENCE FOUNDATION



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SUMMARY OF PROGRAM REQUIREMENTS

GENERAL INFORMATION

Program Title: CISE Research Resources (CISE-RR)

Synopsis of Program: This program is designed to increase the capability and capacity to carry out basic research in information technology at U.S. institutions. The program supports the acquisition and/or development of advanced resources for research and integrated research/education activities. Resources may include research equipment, instrumentation, software, data repositories or services. Resources supported under this program are those generally not supported by other programs, because of cost, complexity, level of shared use or other reasons. The Program has three parts:

- **CISE Instrumentation.** Grants for the acquisition and purchase of research resources in areas of science or engineering supported in the CISE Directorate. These research resources should be required for at least two research projects and no more than four research projects.
- **Collaborative Research Resources [no awards in FY2001].** Grants to support the establishment, enhancement, and operation of major resources for multi-investigator, synergistic research or integrated research/education. Awards may be for activities solely within a single academic department, activities drawing from several departments in a single institution, and activities spanning several different institutions.
- **Distributed Research Resources.** Grants for the establishment and maintenance of unique, geographically distributed resources that, once established, can be accessed remotely by CISE researchers around the country.

In each of these programs, interdisciplinary activities are strongly encouraged, but emphasis should be on advancing knowledge and increasing capacity for research in areas of science and engineering supported by CISE. Women, minorities, persons with disabilities, minority institutions and researchers in EPSCoR jurisdictions are strongly encouraged to submit proposals.

Cognizant Program Officer(s):

- CISE Research Resources Program Director, Computer and Information Science and Engineering, Experimental and Integrative Activities, 1160 N, telephone: 703-292-8980, e-mail: CISERR@nsf.gov.
- W. Richards Adrion, Division Director, Computer and Information Science and Engineering, Experimental and Integrative Activities, 1160N, telephone: 703-292-8980, e-mail: wadrion@nsf.gov.

Applicable Catalog of Federal Domestic Assistance (CFDA) Number(s):

- 47.070 --- Computer and Information Science and Engineering

ELIGIBILITY INFORMATION

- **Organization Limit:** Proposals may be submitted by both U.S. graduate-degree-granting institutions and U.S. four-year institutions with departments or research programs in areas of science or engineering supported in the CISE Directorate. Proposals involving inter-departmental and inter-institutional sharing arrangements are eligible and encouraged.
- **PI Eligibility Limit:** None
- **Limit on Number of Proposals:** None

AWARD INFORMATION

- **Anticipated Type of Award:** Standard or Continuing Grant
- **Estimated Number of Awards:** 20-30 awards are anticipated in FY 01.
- **Anticipated Funding Amount:** Anticipated program budget is \$4 million in FY2001 and \$8 million annually in FY2002 and thereafter. (See IV. Award Information for anticipated funding amounts.)

PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

A. Proposal Preparation Instructions

- **Letters of Intent:** Submission of Letters of Intent is optional. Please see the full program announcement/solicitation for further information.
- **Full Proposals:** Supplemental Preparation Guidelines
 - The program announcement/solicitation contains supplements to the standard Grant Proposal Guide (GPG) proposal preparation guidelines. Please see the full program announcement/solicitation for further information.

B. Budgetary Information

- **Cost Sharing Requirements:** Cost Sharing is Specialized. Please see the full program solicitation for further information.
- **Indirect Cost (F&A) Limitations:** None
- **Other Budgetary Limitations:** Not Applicable.

C. Deadline/Target Dates

- **Letters of Intent (*optional*):** June 6, 2001
- **Preliminary Proposals (*optional*):** None
- **Full Proposal Deadline Date(s):**

July 6, 2001: First Monday in February in 2002 and thereafter
optional letters of intent due 1 month before the due date.

D. FastLane Requirements

- **FastLane Submission:** Required
- **FastLane Contact(s):**
 - Helen Walston, Senior Program Assistant, Computer and Information Science and Engineering, Experimental and Integrative Activities, 1160 N, telephone: 703-292-8980, e-mail: hwalston@nsf.gov.

PROPOSAL REVIEW INFORMATION

- **Merit Review Criteria:** National Science Board approved criteria. Additional merit review considerations apply. Please see the full program announcement/solicitation for further information.

AWARD ADMINISTRATION INFORMATION

- **Award Conditions:** Standard NSF award conditions apply.
- **Reporting Requirements:** Standard NSF reporting requirements apply.

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I. INTRODUCTION

The CISE Research Resources Program is designed to increase the capability and capacity to carry out basic research in information technology at U.S. institutions as measured by increased scientific activity and by increased participation in research and integrated research/education projects of both faculty and graduate students.

One of the barriers to research and education is the unavailability of specialized resources. Often necessary resources cannot be provided under grants through other CISE programs due to their expense, because they can be justified only when used for multiple projects, or for other reasons. Resources may take the form of unique equipment, instruments, software systems, software libraries, data repositories or specialized research services that must be acquired or designed and developed. Some resources can be established and maintained by research groups, others require technical support during the development phase, and others, for example those shared nationally, require ongoing maintenance and/or technical and user support.

Recognizing the range of needs, the CISE Research Resources Program has three components: **CISE Instrumentation, Collaborative Research Resources, and Distributed Research Resources.**

The Instrumentation component addresses the need to support the acquisition of resources that can be justified by the resource requirements of 2 to 4 research projects. This component replaces the Instrumentation Grants for Research in CISE (NSF 98-132) Program.

The Collaborative Research Resources component encourages the development of synergistic, multi-investigator research or integrated research/education projects by supporting the design, development, acquisition and technical support of major resources required for such projects. Typical projects may involve researchers from a single academic department, from several departments in a single institution or from several different institutions. This component is a companion to, but does not replace, CISE participation in the Major Research Instrumentation (NSF 01-7), the CISE Research Infrastructure (NSF 00-5), and the CISE Minority Institutions Infrastructure (NSF 96-15) programs. **Please note that no Collaborative Research Resources awards will be made in FY2001.**

The Distributed Research Resources component supports the design, development, deployment and maintenance of resources that can be shared nationally, usually via the Internet. These are resources in support of CISE research and education, rather than self-contained research projects. The intent is not to support research into the technical problems of establishing such facilities, such as how to store and index massive amounts of data or how to provide high-bandwidth national connections. This component replaces the CISE Advanced Distributed Resources for Experiments (CADRE) component of the Experimental Activities (NSF 98-127) Program.

In all three components of the CISE Research Resources Program, the CISE Directorate is particularly interested in increasing capacity and capability for information technology research and encourages proposals from researchers, groups, departments and institutions where such

resources will have a substantial impact on the research and educational activities. Women, minorities, persons with disabilities, minority institutions and researchers in EPSCoR jurisdictions are strongly encouraged to submit proposals.

II. PROGRAM DESCRIPTION

This program is designed to increase the capability and capacity to carry out information technology research at U.S. institutions. The program supports the acquisition and/or development of advanced resources for research and integrated research/education activities. Resources may include research equipment, instrumentation, software, data repositories or services. Resources supported under this program are those generally not supported by other programs. The Program has three parts:

A. CISE Instrumentation. The CISE Instrumentation component provides grants for the acquisition and purchase of shared research resources. CISE Instrumentation grants will be for one to three years and typically range from \$30,000 to \$200,000 total. In particular, requests should not be for resources that could be expected to be provided on existing research grants. Only costs associated with the acquisition of the resources will be supported.

These resources should be necessary for the pursuit of specific research projects in areas of science or engineering supported in the CISE Directorate. Local computing resources (specialized processors, parallel processors, local area networks, robotic equipment, sensors and instruments, visualization and display technology, application and systems software, data resources, etc.) may be supported under this program. General-purpose office equipment, software or databases are not eligible for support. Particular emphasis is given to those unique or new research capabilities that will ensue from the acquisition of the equipment. The equipment should be required for at least two research projects and no more than four research projects.

The CISE Instrumentation component replaces the Instrumentation Grants for Research in CISE (NSF 98-132) Program.

B. Collaborative Research Resources. Please note that no Collaborative Research Resources awards will be made in FY2001; awards will be given based on the February 2002 and later competitions. Grants will be for one to three years and typically will range from \$200,000 to \$500,000 per year. The Collaborative Research Resources component of the Program provides grants to support the establishment, enhancement, and operation of major resources for multi-investigator, synergistic research or integrated research/education. Awards may be for activities solely within a single academic department, activities drawing from several departments in a single institution, and activities spanning several different institutions. Research activities requiring the resources supported under the program are expected to demonstrate synergy among the activities and researchers. Integrated research/education activities should significantly

contribute to expanding the numbers of minority and women students attracted to and retained in computer and information science and engineering. Interdisciplinary activities are strongly encouraged, but emphasis should be on advancing knowledge in and increasing capacity for information technology research. There should be an existing core of active researchers with a track record of research in areas of science and engineering supported by CISE. An important consideration is whether the resources will enable the researchers to undertake important activities that otherwise would not be possible under individual awards.

The Collaborative Research Resources component provides support for the development and/or acquisition of research resources, but not for general resources, such as workstations or upgrades of existing facilities. Before applying, a proposing group should consider whether individual research grants would be a more appropriate source of funding. The Collaborative Research Resources component is designed to support resources for relatively large collaborative projects that typically require technical support as part of the development or establishment of the resources. Potential applicants requiring resources that can be acquired as a unit, that are to be shared among unrelated projects, and/or that are relatively easy to maintain should consider the Instrumentation component of this program.

Eligible project costs are equipment, instrumentation, software, data repositories, services, maintenance and appropriate technical support. Appropriate technical support refers to technical personnel and associated indirect costs that are necessary for the design, development, deployment, operation and maintenance of the resources. Support for graduate and/or undergraduate assistants may be included if (1) the assistants are participating in the design, development, deployment, operation and maintenance of the resources, (2) if the assistants are participating in assessing the educational outcomes of the project, where appropriate, or (3) if the assistants are drawn from underrepresented groups (minorities and/or women) and are participating directly in the integrated research/education activity, or related curriculum development projects, mentoring, and outreach.

Collaborative Research Resources proposals may include a request for funds for a Research Experience for Undergraduates (NSF 00-107) (<http://www.nsf.gov/home/crssprgm/reu/start.htm>) supplement as part of the proposal. Salaries for faculty, postdoctoral research associates, secretarial and clerical personnel are not eligible project costs.

The Collaborative Research Resources component is a companion to, but does not replace, CISE participation in the Major Research Instrumentation (NSF 98-16), the CISE Research Infrastructure (NSF 00-5), and the CISE Minority Institutions Infrastructure (NSF 96-15) programs. The Collaborative Research Resources component shares many of its goals with these and previous infrastructure programs.

C. Distributed Research Resources. Grants will typically be in the range of \$100,000 to \$300,000 per year for three to four years. The Distributed Research Resources component provides grants for the establishment and maintenance of unique, geographically distributed resources that, once established, can be accessed remotely by researchers around the country. These are typically specialized resources such as unique equipment, software libraries, organizations, or data repositories, primarily in support of research and education and not self-contained research projects. The intent is not to support research into the technical problems of establishing such facilities, such as how to store and index massive amounts of data or how to provide high-bandwidth national connections (Such a project may be appropriate under the Collaborative Research Resources component).

Resources supported under the Distributed Research Resources component should have a demonstrated national need in the computer and information science and engineering research and education community. Proposals will need to demonstrate mechanisms for making the resource available to users nationally, for supporting external users, and for responding to evolving user needs.

Grants under the Distributed Research Resources component will support the initial establishment or updating of resources. Expenses for operations and maintenance, including equipment and staff, will also be supported. NSF staff will monitor these awards carefully. In particular, by the end of the second year of the award, awardees will be expected to show evidence that the distributed resource is being used by researchers and or educators outside of the host institution(s) and will be required to have in place a transition plan (other sources of support; a mechanism for re-charge; etc.) for continuing the resource after the end of NSF support. Only in rare cases will NSF support for a resource be renewed after the initial grant.

The Distributed Research Resources component replaces the CISE Advanced Distributed Resources for Experiments (CADRE) component of the Experimental Activities (NSF 98-127) Program.

In all three components of the Research Resources, the CISE Directorate is particularly interested in increasing capacity and capability for information technology research and encourages proposals from researchers, groups, departments and institutions where such resources will have a substantial impact on the research and educational activities. Women, minorities, persons with disabilities, minority-serving institutions and researchers in EPSCoR jurisdictions are strongly encouraged to submit proposals.

Minority-serving institutions are those with student enrollments of more than 50 percent from the following minority groups which are underrepresented in advanced levels of science and engineering: African-Americans, Alaskan Natives, Hispanics, Native Americans, and Native Pacific Islanders (Micronesian or Polynesian); or at least 20 percent from one of the preceding groups.

EPSCoR: Experimental Program to Stimulate Competitive Research (<http://www.ehr.nsf.gov/epscor/start.cfm>) jurisdictions include Alabama, Alaska, Arkansas, Hawaii, Idaho, Kansas, Kentucky, Louisiana, Maine, Mississippi, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Puerto Rico, South Carolina, South Dakota, Vermont, West Virginia, and Wyoming.

III. ELIGIBILITY INFORMATION

Proposals may be submitted by both U.S. graduate-degree-granting institutions and U.S. four-year institutions with departments or research programs in areas of science or engineering supported in the CISE Directorate. Proposals involving inter-departmental and inter-institutional sharing arrangements are eligible and encouraged. In addition to this restriction, also see [Grant Proposal Guide](#) for general guidance.

IV. AWARD INFORMATION

The anticipated program budget is \$4 million in FY2001 and \$8 million annually in FY2002 and thereafter (subject to the availability of funds):

- **CISE Instrumentation:** 15-25 awards ranging from \$30,000 to \$200,000 total for one to three years;
- **Collaborative Research Resources:** 5-10 awards ranging from \$200,000 to \$500,000/year for one to three years (**No awards in FY2001; awards will be made beginning in FY2002**);
- **Distributed Research Resources:** 4-5 awards ranging from \$100,000 to \$300,000/year for three to four years.

V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

A. Proposal Preparation Instructions

Letters of Intent: Optional letters of intent are due June 6, 2001, and one month in advance of the due date thereafter. These may be sent via e-mail to the program officer (CISE-RR@nsf.gov) and should include: the program component (Instrumentation, Collaborative Research Resources, Distributed Research Resources); a title; the Principal and Co-Principal Investigators; participating institutions (when there is more than one); a one paragraph description. Suggestions for reviewers may also be included.

Full Proposal:

Proposals submitted in response to this program announcement/solicitation should be prepared and submitted in accordance with the general guidelines contained in the NSF *Grant Proposal Guide* (GPG). The complete text of the GPG is available electronically on the NSF Web Site at: <http://www.nsf.gov/cgi-bin/getpub?nsf012>. Paper copies of the GPG may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from pubs@nsf.gov.

In addition to the standard proposal instructions, proposals under the CISE Research Resources Program:

1. The Project Description must not exceed the normal limitation of 15 pages in length.

Note: under this announcement, the required Results from Prior NSF Support section of the Project Description will not be counted as part of 15-page Project Description limitation. However, this section will be limited to 5 additional pages.

2. The Project Description must include an Overview (*maximum of 3 pages*) that briefly describes the resources to be acquired, developed and/or maintained. The section should address the need for the proposed resources and the likely impact on the investigators', the institution's or the nation's capacity and capability for undertaking basic research or integrated research and education on Information Technology.

- For Instrumentation proposals, this section should describe the research and address the resource needs for each of the two-four projects and the extent of the relationship among the projects.
- For Collaborative Research Resources proposals, this section should describe overall goals of the collaborative research or integrated research/education and how the resources will serve to draw the group together.
- For Distributed Research Resources proposals, this section must make clear the extent of the national need for the proposed resources in support of information technology research and education.

3. The Project Description must include a Resources Description (*maximum of 3 pages*) of any unique equipment, instruments, software systems, software libraries, data repositories or specialized research services that will be acquired and/or a detailed development, deployment and maintenance plan (with timelines for project deliverables) for the resources to be developed or integrated. Even where all the resources are to be purchased, the section should provide a plan for managing the resources and access to the resources. Give representative manufacturer and model number, with itemized costs (both list and actual costs) where this is possible. This section should summarize existing resources that are available to the research and provide a rationale for the specific selection(s) proposed.

5. In the remaining pages (*typically 8-10, but with the Overview and Resources Description not to exceed the 15 page limit*), the Project Description must include:

- For Instrumentation proposals, describe and explain the proposed associated research with appropriate scientific justification and literature references. This should demonstrate how the research depends upon both the experimental facilities proposed and the requested level of support, with particular emphasis given to identifying new directions, expansions and extensions not possible without such support. The scientific merit of the research made possible by the requested support is a particularly important selection criterion, thus proposals must contain sufficient detail for an evaluation of the intrinsic scientific merit of all individual or collaborative research or research/education projects proposed. When sub-projects are described, identify the investigators participating in those subprojects.
- For Collaborative Research Resource proposals, describe and explain the proposed associated research or intergrated research/education with appropriate scientific justification and literature references. This should demonstrate how the research or integrated research/education depends upon both the facilities proposed and the requested level of support, with particular emphasis given to identifying new directions, expansions and extensions not possible without such support. For research projects, the scientific merit of the research and the synergistic and collaborative aspects of the project made possible by the requested support is a particularly important selection criterion. For integrated research/education projects, the impact of the project on expanding the numbers of minority and women students attracted to and retained in computer and information science and engineering disciplines is a particularly important selection criterion.
- For Distributed Research Resource proposals, describe and emphasize the impact on Information Technology research and education nationally. This section should also provide detailed plans for making the resource available to users outside of the grantee institution; for technical support of external users; for responding to evolving user needs; for demonstrating evidence of distributed use within two years of the award date; and plans for continuing activities of the resource after cessation of NSF funding.
- For all proposals under this program, this section should describe criteria for measuring success of the project and the expected impact on the departments, institutions and CISE community.

Proposers are reminded to identify the program solicitation number (NSF 01-100) in the program announcement/solicitation block on the proposal Cover Sheet (NSF Form 1207). Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing.

B. Budgetary Information

For Ph.D.-granting institutions, cost sharing in the amount of 33.3% of total Project Cost is required.

The proposed cost sharing must be shown on Line M on the proposal budget. Documentation of the availability of cost sharing must be included in the proposal. Only items which would be allowable under the applicable cost principles, if charged to the project, may be included as the awardee's contribution to cost sharing. Contributions may be made from any non-Federal source, including non-Federal grants or contracts, and may be cash or in-kind (see OMB Circular A-110, Section 23). It should be noted that contributions counted as cost-sharing toward projects of another Federal agency may not be counted towards meeting the specific cost-sharing requirements of the NSF award. All cost-sharing amounts are subject to audit. Failure to provide the level of cost-sharing reflected in the approved award budget may result in termination of the NSF award, disallowance of award costs and/or refund of award funds to NSF.

Indirect Cost (F&A) Limitations: None

C. Deadline/Target Dates

Proposals must be submitted by the following date(s):

Letters of Intent (*optional*): June 6, 2001

Full Proposals by 5:00 PM local time:

July 6, 2001: First Monday in February in 2002 and thereafter
optional letters of intent due 1 month before the due date.

D. FastLane Requirements

Proposers are required to prepare and submit all proposals for this Program Solicitation through the FastLane system. Detailed instructions for proposal preparation and submission via FastLane are available at: <http://www.fastlane.nsf.gov/a1/newstan.htm>. For FastLane user support, call 1-800-673-6188.

Submission of Signed Cover Sheets. The signed copy of the proposal Cover Sheet (NSF Form 1207) must be postmarked (or contain a legible proof of mailing date assigned by the carrier) within five working days following proposal submission and be forwarded to the following address:

National Science Foundation
DIS – FastLane Cover Sheet
4201 Wilson Blvd.
Arlington, VA 22230

VI. PROPOSAL REVIEW INFORMATION

A. NSF Proposal Review Process

Reviews of proposals submitted to NSF are solicited from peers with expertise in the substantive area of the proposed research or education project. These reviewers are selected by Program Officers charged with the oversight of the review process. NSF invites the proposer to suggest at the time of submission, the names of appropriate or inappropriate reviewers. Care is taken to ensure that reviewers have no conflicts with the proposer. Special efforts are made to recruit reviewers from non-academic institutions, minority-serving institutions, or adjacent disciplines to that principally addressed in the proposal.

Proposals will be reviewed against the following general review criteria established by the National Science Board. Following each criterion are potential considerations that the reviewer may employ in the evaluation. These are suggestions and not all will apply to any given proposal. Each reviewer will be asked to address only those that are relevant to the proposal and for which he/she is qualified to make judgements.

What is the intellectual merit of the proposed activity?

How important is the proposed activity to advancing knowledge and understanding within its own field or across different fields? How well qualified is the proposer (individual or team) to conduct the project? (If appropriate, the reviewer will comment on the quality of the prior work.) To what extent does the proposed activity suggest and explore creative and original concepts? How well conceived and organized is the proposed activity? Is there sufficient access to resources?

What are the broader impacts of the proposed activity?

How well does the activity advance discovery and understanding while promoting teaching, training, and learning? How well does the proposed activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)? To what extent will it enhance the infrastructure for research and education, such as facilities, instrumentation, networks, and partnerships? Will the results be disseminated broadly to enhance scientific and technological understanding? What may be the benefits of the proposed activity to society?

Principal Investigators should address the following elements in their proposal to provide reviewers with the information necessary to respond fully to both of the above-described NSF merit review criteria. NSF staff will give these elements careful consideration in making funding decisions.

Integration of Research and Education

One of the principal strategies in support of NSF's goals is to foster integration of research and education through the programs, projects, and activities it supports at academic and research institutions. These institutions provide abundant opportunities where individuals

may concurrently assume responsibilities as researchers, educators, and students and where all can engage in joint efforts that infuse education with the excitement of discovery and enrich research through the diversity of learning perspectives.

Integrating Diversity into NSF Programs, Projects, and Activities

Broadening opportunities and enabling the participation of all citizens -- women and men, underrepresented minorities, and persons with disabilities -- is essential to the health and vitality of science and engineering. NSF is committed to this principle of diversity and deems it central to the programs, projects, and activities it considers and supports.

Additional Review Criteria

The following additional considerations will also be used in evaluating proposals in all three parts of the program:

- Justification of need for proposed equipment, instruments, software systems, software libraries, data repositories or specialized research services in order to conduct the research or the integrated research/education,
- Appropriateness of equipment, plan for maintenance and operation during the period of the award, and
- Proposed partnerships for carrying out the research or integrated research/education or for extending and broadening the access to or impact of the activities.

A summary rating and accompanying narrative will be completed and signed by each reviewer. In all cases, reviews are treated as confidential documents. Verbatim copies of reviews, excluding the names of the reviewers, are sent to the Principal Investigator/Project Director by the Program Director. In addition, the proposer will receive an explanation of the decision to award or decline funding.

B. Review Protocol and Associated Customer Service Standard

All proposals are carefully reviewed by at least three other persons outside NSF who are experts in the particular field represented by the proposal. Proposals submitted in response to this announcement/solicitation will be reviewed by Mail and/or panel review.

Reviewers will be asked to formulate a recommendation to either support or decline each proposal. The Program Officer assigned to manage the proposal's review will consider the advice of reviewers and will formulate a recommendation.

NSF will be able to tell applicants whether their proposals have been declined or recommended for funding within six months for 95 percent of proposals. The time interval begins on the proposal deadline or target date or from the date of receipt, if deadlines or target dates are not used by the program. The interval ends when the Division Director accepts the Program Officer's recommendation.

In all cases, after programmatic approval has been obtained, the proposals recommended for funding will be forwarded to the Division of Grants and Agreements for review of business, financial, and policy implications and the processing and issuance of a grant or other agreement. Proposers are cautioned that only a Grants and Agreements Officer may make commitments, obligations or awards on behalf of NSF or authorize the expenditure of funds. No commitment on the part of NSF should be inferred from technical or budgetary discussions with a NSF Program Officer. A Principal Investigator or organization that makes financial or personnel commitments in the absence of a grant or cooperative agreement signed by the NSF Grants and Agreements Officer does so at its own risk.

VII. AWARD ADMINISTRATION INFORMATION

A. Notification of the Award

Notification of the award is made to *the submitting organization* by a Grants Officer in the Division of Grants and Agreements. Organizations whose proposals are declined will be advised as promptly as possible by the cognizant NSF Program Division administering the program. Verbatim copies of reviews, not including the identity of the reviewer, will be provided automatically to the Principal Investigator. (See section VI.A. for additional information on the review process.)

B. Award Conditions

An NSF award consists of: (1) the award letter, which includes any special provisions applicable to the award and any numbered amendments thereto; (2) the budget, which indicates the amounts, by categories of expense, on which NSF has based its support (or otherwise communicates any specific approvals or disapprovals of proposed expenditures); (3) the proposal referenced in the award letter; (4) the applicable award conditions, such as Grant General Conditions (NSF-GC-1)* or Federal Demonstration Partnership (FDP) Terms and Conditions * and (5) any announcement or other NSF issuance that may be incorporated by reference in the award letter. Cooperative agreement awards also are administered in accordance with NSF Cooperative Agreement Terms and Conditions (CA-1). Electronic mail notification is the preferred way to transmit NSF awards to organizations that have electronic mail capabilities and have requested such notification from the Division of Grants and Agreements.

*These documents may be accessed electronically on NSF's Web site at http://www.nsf.gov/home/grants/grants_gac.htm. Paper copies may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from pubs@nsf.gov.

More comprehensive information on NSF Award Conditions is contained in the NSF *Grant Policy Manual* (GPM) Chapter II, available electronically on the NSF Web site at <http://www.nsf.gov/cgi-bin/getpub?gpm>. The GPM is also for sale through the Superintendent of Documents, Government Printing Office (GPO), Washington, DC 20402. The telephone number at GPO for subscription information is (202) 512-1800. The GPM may be ordered through the GPO Web site at <http://www.gpo.gov>.

C. Reporting Requirements

For all multi-year grants (including both standard and continuing grants), the PI must submit an annual project report to the cognizant Program Officer at least 90 days before the end of the current budget period.

Within 90 days after the expiration of an award, the PI also is required to submit a final project report. Approximately 30 days before expiration, NSF will send a notice to remind the PI of the requirement to file the final project report. Failure to provide final technical reports delays NSF review and processing of pending proposals for that PI. PIs should examine the formats of the required reports in advance to assure availability of required data.

NSF has implemented an electronic project reporting system, available through FastLane. This system permits electronic submission and updating of project reports, including information on project participants (individual and organizational), activities and findings, publications, and other specific products and contributions. PIs will not be required to re-enter information previously provided, either with a proposal or in earlier updates using the electronic system.

VIII. CONTACTS FOR ADDITIONAL INFORMATION

General inquiries regarding CISE Research Resources should be made to:

- CISE Research Resources Program Director, Computer and Information Science and Engineering, Experimental and Integrative Activities, 1160 N, telephone: 703-292-8980, e-mail: CISERR@nsf.gov.
- W. Richards Adrion, Division Director, Computer and Information Science and Engineering, Experimental and Integrative Activities, 1160N, telephone: 703-292-8980, e-mail: wadrion@nsf.gov.

For questions related to the use of FastLane, contact:

- Helen Walston, Senior Program Assistant, Computer and Information Science and Engineering, Experimental and Integrative Activities, 1160 N, telephone: 703-292-8980, e-mail: hwalston@nsf.gov.

IX. OTHER PROGRAMS OF INTEREST

The NSF *Guide to Programs* is a compilation of funding for research and education in science, mathematics, and engineering. The NSF *Guide to Programs* is available electronically at <http://www.nsf.gov/cgi-bin/getpub?gp>. General descriptions of NSF programs, research areas, and eligibility information for proposal submission are provided in each chapter.

Many NSF programs offer announcements or solicitations concerning specific proposal requirements. To obtain additional information about these requirements, contact the appropriate NSF program offices. Any changes in NSF's fiscal year programs occurring after press time for the *Guide to Programs* will be announced in the NSF [E-Bulletin](#), which is updated daily on the NSF web site at <http://www.nsf.gov/home/ebulletin>, and in individual program announcements/solicitations. Subscribers can also sign up for NSF's [Custom News Service](#) (<http://www.nsf.gov/home/cns/start.htm>) to be notified of new funding opportunities that become available.

Other related programs of interest (additional information may be found at <http://www.cise.nsf.gov/eia/index.html>):

CISE Educational Innovation (EI) (NSF 00-33) CISE Minority Institutions Infrastructure (MII) (NSF 96-15) CISE Research Infrastructure (NSF 00-5) Combined Research-Curriculum Development (CRCD) (NSF 00-66) Experimental Program to Stimulate Competitive Research (EPSCoR) (NSF 00-43) Information Technology Research (ITR) (NSF 00-126) Major Research Instrumentation (MRI) (NSF 01-7)

This program replaces the following programs:

Instrumentation Grants for Research in CISE (NSF 98-132) The CADRE component of the Experimental Activities (NSF 98-127)

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NSF 01-100